

Bid Reference 13-03

**INVITATION TO BID AND INSTRUCTIONS TO BIDDERS
LAWRENCEBURG BABE RUTH BASEBALL FIELD LIGHTING**

**BID OPENING
NOVEMBER 13, 2013
10:00 A.M., local time**

**at the
LAWRENCEBURG CITY ADMINISTRATION BUILDING
ROUND ROOM
233 WEST GAINES STREET
LAWRENCEBURG, TN 38464**

It is the policy of the City of Lawrenceburg that all contractors bidding on applicable city projects must include in their bid package the "TITLE VI COMPLIANCE POLICY" statement below thereby affirming their compliance with Title VI of the Civil Rights Act of 1964.

Failure to include a "TITLE VI COMPLIANCE POLICY" statement in an RFP or a Bid will result in disqualification of the Contractor's RFP or Bid.

This policy applies to all Engineering Firms that do business with the City of Lawrenceburg, as well as any individual contractors wishing to submit a bid for city projects.

**TELEPHONE: (931)762-4459
ATTN: CHRIS SHAFFER
CSHAFFER@LAWRENCEBURGTN.GOV
CITY OF LAWRENCEBURG, TENNESSEE**

INVITATION TO BID AND INSTRUCTIONS FOR BIDDERS

Project: **Bid Reference 13-03**
LAWRENCEBURG BABE RUTH BASEBALL FIELD LIGHTING

Invitation

Sealed bids will be accepted by the City of Lawrenceburg until 4:00P.M., local time, November 12, 2013, then publicly opened on November 13th at 10:00A.M., in the City Administration Building at 233 West Gaines Street, Lawrenceburg, Tennessee, for furnishing all labor, materials, supplies, tools, and equipment necessary to perform all work and services described in the bid specifications attached hereto, in strict accordance with the terms and provisions of said Contract, and the Specifications and Drawings.

All bids must be completed and submitted on the Bid Form provided. All options must be bid unless the Bid Form provides otherwise. The bids shall be submitted on or before the time set for the opening of bids. Bids received after the time so set are late bids and will not be considered. Late bids, unsealed bids, unmarked envelopes, and incorrectly marked envelopes will not be opened. Electronic bids are not accepted.

Work shall commence after receipt of a written Notice to Proceed and authorization from Chris Shaffer. Work shall be completed within the timeframe agreed to by the parties.

Discrepancies

Should the Bidder find any discrepancies in, or omission from, the bid documents, or should the Bidder be in doubt as to their meaning, the Bidder shall at once notify Chris Shaffer at (931)762-4459 and obtain an interpretation or clarification prior to submitting a bid. Any interpretation or clarification given in accordance with this provision shall be in writing and will be distributed to all known Bidders. Only questions answered in writing will be binding. Oral and other interpretations or clarifications will be without legal effect.

Prices

The Bidder shall submit a LUMP SUM Price for the project as specified on the Bid Form. It is agreed that this bid document in its entirety is included in and made a part of the contract between the City and the successful Bidder.

Withdrawal of Bids

Bids may be withdrawn on written or telegraphic request received from Bidders prior to the time fixed for opening of the bids.

Drug-Free Workplace Affidavit Form

A Drug-Free Workplace Affidavit form is included in this bid package and must be submitted with the bid.

Rejection of Bids

The City reserves the right to reject any and all bids when such rejection is in the interest of the City of Lawrenceburg; to reject the bid of a Bidder who has previously failed to perform properly or complete on time jobs of a similar nature; to reject the bid of a Bidder who is not, in the opinion of the City, in a position to perform the Contract, and to reject the bid of a Bidder not submitted in accordance with this Invitation to Bid.

References

Upon request by the City, each Bidder shall furnish at least three (3) references for whom work similar to that covered by the specifications herein was performed, the year in which such work was performed and the manner of execution, and giving such other information as will tend to show the Bidder's ability to perform the required work.

Equipment

The Bidder shall have available under Bidder's control, tools and equipment of the type, character and amount required to complete the proposed work within the specified time. Each Bidder shall furnish a list of the tools and equipment proposed for use on the work if requested.

Personnel

Each Bidder shall submit with their bid a written qualifications statement/resume for the project manager that will be assigned to the project. Each qualifications statement/resume shall clearly indicate the experience relative to the project and show competence relative to the work and responsibility of each position.

Method of Work

Upon request, each Bidder shall describe the method or methods to be used in the performance of the required work.

Bidders Interested in More than One Bid

A party who has quoted prices to a Bidder is not thereby disqualified from quoting prices to other Bidders or from submitting a bid directly for the work; however, more than one bid for the same work from an individual or entity under the same or different name will not be considered.

Bid Surety

Each bid shall be accompanied by a bid guarantee in a form acceptable to the City in the amount of 5 percent (5%) of the total bid amount. The form of the bid guarantee shall be a bid bond or other suitable instrument (i.e. cashier's check, certified check, or Letter of Credit). The bid guarantees of unsuccessful Bidders shall be returned to them by the City within fifteen (15) consecutive calendar days after execution of the Contract.

Performance and Payment Bond

A Performance and Payment Bond in the amount of 100% of the total contract price, with a corporate surety acceptable to the City, will be required for the faithful performance of the contract. The bidder shall state in his proposal the name and address of the surety who will sign his bond in the event a contract is awarded to him.

Insurance

The successful Bidder will be required to maintain Worker's Compensation, Comprehensive General Liability, and Comprehensive Automobile Liability and Property Damage Insurance in accordance with the provisions of the Contract Documents. The City of Lawrenceburg, Tennessee shall be named as an additional insured.

Award of Contract

The City will make the award as soon as practical to the lowest responsible Bidder, price and other factors considered, provided it is reasonable and in the best interest of the City. The successful Bidder shall be required to execute the Contract attached hereto.

City Officers and Employees Not To Have Financial Interest

No contract shall be made with any officer or employee of the City or any firm or corporation in which any officer or employee of the City has financial interest.

Compliance with All Laws, Ordinances, Statutes, and Regulations

The Contractor shall comply with all federal, state, county and local laws, ordinances, statutes, and regulations.

Bid Submittal Instructions

Pursuant to Tennessee Code Annotated 62-6-119, each bid must be submitted in an opaque sealed envelope marked on the outside as follows:

From: Bidder's Name
Bidder's Address
General Contractor's State of Tennessee License Number
Bidder's License Expiration Date
Bidder's License Category or Classification

To: Attn: Chris Shaffer
City Administrator
City of Lawrenceburg
233 West Gaines
Lawrenceburg TN 38464

Late Bids are not accepted.

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BID BOND

KNOW ALL MEN BY THESE PRESENTS,

That we, _____,

(hereinafter called the "Principal"), as Principal, and the _____,

of _____

a corporation duly organized under the laws of the State of _____

(hereafter called the "Surety"), as Surety, are held and firmly bound unto the City of Lawrenceburg, Tennessee, (hereinafter called the "Obligee"), as Obligee, in the sum of five percent (5%) of the bid price for the payment of which sum well and truly be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid

for:_____.

NOW THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the Invitation To Bid and Instructions to Bidders with good and sufficient surety for the faithful performance of such contract, or in event of the failure of the Principal to enter such contract and give such bond, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this _____ day of _____, 20____.

IN THE PRESENCE OF:

Principal

Witness

DRUG-FREE WORKPLACE AFFIDAVIT OF BIDDER

STATE OF _____
COUNTY OF _____

Comes the affiant after having first been duly sworn and testifies as follows:

1. My name is _____ . I hold the principal office of _____ for _____.

(Name of Principal Office) (Name of Bidding Entity)

2. _____ has submitted a bid to City of Lawrenceburg for the
(Name of Bidding Entity)
construction of the Work entitled _____.

3. _____ employs no less than five (5) employees.

(Name of Bidding Entity)

4. In accordance with Tenn. Code Ann. §50-9-113, this is to certify that _____ has in effect at the time of its submission
(Name of Bidding Entity)
of a bid to perform the construction of the Work identified above, a drug-free workplace program that complies with Title 50, Chapter 9 of the Tennessee Code.

5. This affidavit is made on personal knowledge.

Further the affiant saith not this _____ day of _____, 201__.

Title: _____

Subscribed and sworn to before me this _____ day of _____, 201__.

My Commission Expires: _____

City of Lawrenceburg, Tennessee
BID PRICING SHEET

Bid Reference: 13-03
 LAWRENCEBURG BABE RUTH BASEBALL FIELD LIGHTING

Total Bid Price: \$ _____ (Price in Numbers)

_____ (Price in Words)

Signature of Authorized Official

Name and Title (Printed)

Legal Name of Business

Physical Address

Mailing Address

Telephone Number

Fax Number

Email

PART 1 – GENERAL

1.1 SUMMARY

- A. Work covered by this section of the specifications shall conform to the contract documents, engineering plans as well as state and local codes.
- B. The purpose of these specifications is to define the performance and design standards for the Lawrenceburg Babe Ruth Baseball Park. The manufacturer/contractor shall supply lighting equipment to meet or exceed the standards set forth by the criteria set forth in these specifications.
- C. The sports lighting will be for the following fields:
 - 1. Field #1.
- D. The primary goals of this sports lighting project are:
 - 1. Life Cycle Cost: In order to reduce the operating budget, the preferred lighting system shall be energy efficient and cost effective to operate.
 - 2. Environmental Light Control: These fields are located very close together and spill and glare for an adjoining field could impact playability of another field. It is the goal of this project to minimize spill light and glare.
- E. All lighting designs shall comply with all THSAA standards.

1.2 LIFE CYCLE COSTS

- A. Energy Consumption: The average kWh consumption for the field lighting system shall be 109.5 or less.
- B. 10 Year Life Cycle Cost: Manufacturer shall submit 10 year life cycle cost calculations as follows. Equipment price and total life cycle cost shall be entered separately on bid form.
 - a. Luminary Energy Consumption
Luminaries x _____ kW demand per luminary x \$.08 kWh rate x 300 annual usage hours x 10 years
TOTAL 10 Year Life Cycle Operating Cost =

1.3 LIGHTING STRUCTURE

Bid shall include installation of lighting structure.

1.4 WARRANTY AND GUARANTEE

- A. 10 Year Warranty: Each manufacturer shall supply a signed warranty covering the entire system, excluding fuses and lamps, for 10 years from the date of shipment. Labor shall be included for two years. Lamps shall be warranted for two years for parts and one year for labor. Warranty may exclude fuses, storm damage, vandalism, abuse, and unauthorized repairs or alterations.

1.5 DELIVERY TIMING

- A. Equipment On-Site: The equipment must be on-site 4 to 6 weeks from receipt of approved submittals and receipt of complete order information.

1.7 PRE-BID SUBMITTAL REQUIREMENTS

- A. Approved Product: Metal Halide lighting products are the approved product. All substitutions must provide a complete submittal package for approval as outlined in Submittal Information at the end of this section at least ten days prior to bid. Special manufacturing to meet the standards of this specification may be required. An addendum will be issued prior to bid listing any other approved lighting manufacturers and designs.
- B. Design Approval: The owner will review pre-bid shop drawings from the manufacturers to ensure compliance to the specification. If the design meets the design requirements of the specifications, a letter will be used to the manufacturer indicating approval of the specific design submitted.

1.8 ALTERNATE SYSTEM REQUIREMENTS

- A. Compliance to Specifications: Acceptance of a bid alternate does not negate the contractor and lighting manufacturer's responsibility to comply fully with the requirements of these specifications. Any exceptions to the specifications must be clearly stated in the prior approval submittal documents.
- B. Light Level Requirements: Manufacturer shall provide computer models guaranteeing light levels on the field for 5000 hours. If a constant light level cannot be provided, a maximum Recoverable Light Loss Factor of 0.70 shall be applied to the initial light level design to achieve the following initial and maintained light levels. For alternate systems, scans for both initial and maintained light levels shall be submitted.
- C. Manufacturers that do not control lamp output through capacitance must utilize RLLF and meet initial and maintained light levels listed below.
- D. Lamps greater than 155,000 lumens will not be allowed.
- E. Revised Electrical Distribution: Manufacturer shall provide revised electrical distribution plans to include changes to service entrance, panel, and wire sizing.

PART 2 – PRODUCT

2.1 LIGHTING SYSTEM CONSTRUCTION

- A. System Description: Lighting system shall consist of the following:
1. Galvanized steel poles and cross-arm assembly.
 2. Pre-stressed concrete base embedded in concrete backfill allowed to cure 12-24 hours before pole stress is applied. Alternate may be an anchor bolt foundation designed such that the steel pole and any exposed steel portion of the foundation be located a minimum of 18 inches above final grade. The concrete shall be allowed to cure for a minimum of 28 days before the pole stress is applied. Direct bury concrete poles, direct bury steel poles and steel stub bases are not allowed.
 3. All luminaires shall be constructed with a die-cast aluminum housing or external hail shroud to protect the luminaire reflector system.
 4. Manufacturer will remote all ballasts and supporting electrical equipment in aluminum enclosures mounted approximately 10' above grade. The enclosures shall include ballast, capacitor, and fusing for each luminaire. Safety disconnect per circuit for each pole structure will be located in the enclosure.
 5. Wire harness complete with an abrasion protection sleeve, strain relief, and plug-in connections for fast, trouble-free installation.

6. Lighting Contractor Cabinet(s) constructed of NEMA Type 4 aluminum, designed for easy installation with custom configured contactor modules for 30, 60, and 100 amps, labeled to match field diagrams and electrical design. Manual Off-On-Auto selector switches shall be provided.

B. Manufacturing Requirements: All components shall be designed and manufactured as a system. All luminaries, wire harnesses, ballast, and other enclosures shall be factory assembled, aimed, wired, and tested.

C. Durability: All exposed components shall be constructed of corrosion resistant material and/or coated to help prevent corrosion. All exposed steel shall be hot dip galvanized per ASTM A123. All exposed hardware and fasteners shall be stainless steel of at least 18-8 grade, passivated and polymer coated to prevent possible galvanic corrosion to adjoining metals. All exposed aluminum shall be powder coated with high performance polyester. All exterior reflective inserts shall be anodized, coated with a clear, high gloss, durable fluorocarbon, and protected from direct environmental exposure to prevent reflective degradation or corrosion. All wiring shall be enclosed within the cross-arms, pole, or electrical components enclosure.

D. Lightning Protection: All structures shall be equipped with lightning protection meeting NFPA 780 standards. Contractor shall supply and install a ground rod of not less than 5/8" in diameter and 8' in length, with a minimum of 10' embedment. Ground rod should be connected to the structure by a copper main down conductor with a minimum size of #2 for poles with less than 75' mounting height and 2/0 for poles with more than 75' mounting height.

E. Safety: All system components shall be UL Listed for the appropriate application.

F. Electric Power Requirements for the Sports Lighting Equipment:

1. Maximum total voltage drop: Voltage drop to the disconnect switch located on the poles shall not exceed three (3) percent of the rated voltage.

2.2 STRUCTURAL PARAMETERS

A. Support Structure Wind Load Strength: Poles and other support structures, brackets, arms, bases, anchorages, and foundations shall be determined based on the 2003 edition of the IBC Building Code, wind speed of 90 mph, exposure category C. Luminary, visor, and cross-arm shall withstand 150 mph winds and maintain luminary aiming alignment. Foundation design will be based on 2003 IBC Building Code.

B. Structural Design: The stress analysis and safety factor of the poles shall conform to AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries, and Traffic Signals.

C. Soil Conditions: The design criteria for these specifications are based on soil design parameters as outlined in the geotechnical report. If a geotechnical report is not provided by the owner, the foundation design shall be based on soils that meet or exceed those of a Class 5 material as defined by Table 1804.2.

It shall be the contractor's responsibility to notify the owner if soil conditions exist other than those on which the foundation design is based, or if the soil cannot be readily excavated. Contractor may issue a change order request/estimate for the owner's approval/payment for additional costs associated with:

a) Providing engineering foundation embedment design by a registered engineer in the State of Tennessee;

- b) Additional materials required to achieve alternate foundation.
- c) Excavation and removal of materials other than normal soils, such as rock, caliche, etc.
- D. Foundation Drawings: Project specific foundation drawings stamped by a registered engineer in the state where the project is located are required. The foundation drawings must list the moment, shear (horizontal) force, and axial (vertical) force at ground level for each pole. These drawings must be submitted at time of bid to allow for accurate pricing.

PART 3 – EXECUTION

3.1 FIELD QUALITY CONTROL

- A. Illumination Measurements: Upon substantial completion of the project and in the presence of the Contractor, Project Engineer, Owner's Representative, and Manufacturer's Representative, illumination measurements shall be taken and verified. The illumination measurements shall be conducted in accordance with IESNA RP-6-01, Appendix B.
- B. Correcting Non-Conformance: If, in the opinion of the Owner or his appointed Representative, the actual performance levels including foot candles, uniformity ratios, and maximum kilowatt consumptions are not in conformance with the requirements of the performance specifications and submitted information, the Contractor shall be liable to any or all of the following:
 - 1. Contractor shall, at his expense, provide and install any necessary additional fixtures to meet the minimum lighting standards. The Contractor shall also either replace the existing poles to meet the new wind load (EPB) requirements or verify by certification by a licensed structural engineer that the existing poles will withstand the additional wind load.
 - 2. Contractor shall minimize the Owner's additional long term fixture maintenance and energy consumption costs created by the additional fixtures by reimbursing the Owner the amount of \$1,000.00 (one thousand dollars) for each additional fixture required.
 - 3. Contractor shall remove the entire unacceptable lighting system and install a new lighting system to meet the specifications.

PART 4 – ELECTRICAL SYSTEM

4.1 ELECTRICAL SYSTEM REQUIREMENTS

- A. Contractor Responsibility: The installing contractor shall be responsible for providing the equipment and installation of a complete and operational system commencing from the secondary side of the service transformer and terminating at the safety disconnect within the electrical enclosure, 10' above grade, on each lighting pole. The electrical contractor shall coordinate the transformer and switchgear locations, as well as identifying the voltage and phase of the service, with the local power company and the Owner's representative before any equipment is installed.
- B. Electric Power Requirements for the Sports Lighting Equipment:
 - Electric power: 480 Volt, three Phase
- C. Maximum total voltage drop: Voltage drop to the disconnect switch located on the poles shall not exceed three (3) percent of the rated voltage.
- D. System Design
 - 1. The electrical system equipment shall consist of:

- a. Conductors and conduit from the main service transformer to the service entrance panel board.
- b. The service entrance panel board with appropriate individual circuit over-current protection. The panel board shall meet local and National Electrical Code (NEC) requirements for the size of the service, AIC rating, and the type of the environment to which it will be exposed. All feeder breakers shall be bolt on type.
- c. Conductors and conduit for the feeder circuit from the service entrance panel board (or from the contactor panel if applicable) to the safety disconnect mounted in the electrical enclosure on each lighting pole 10' above grade.
- d. Grounding conductors and grounding methods for the following:
 - (1) The main service entrance panel board. (per NEC or local codes)
 - (2) The lighting contactor enclosure. (per NEC or local codes)
 - (3) Each electrical component enclosure mounted on the lighting poles. (Equipment Grounding System) (per NEC or local codes)
 - (4) Lightning Protection for individual poles as follows (per NFPA 780):
 - (a) Manufacturer shall provide integrated lightning grounding via concrete encased electrode grounding system as defined by NFPA780 and be UL listed per UL96 and UL96A.
 - (b) If grounding is not integrated into the structure, the Manufacturer or Contractor shall supply grounding electrodes, copper down conductors and exothermic weld kits. Electrodes and conductors shall be sized as required by NFPA 780. The grounding electrode shall be not less than 5/8 inch diameter and 8 feet long, with a minimum of 10 feet embedment. Grounding electrode shall be connected to the structure by a grounding electrode conductor with a minimum size of 2 AWG for poles with 75 feet mounting height or less, and 2/0 AWG for poles with more than 75 feet mounting height.
2. Underground wiring shall be all copper wire and shall be installed in PVC Schedule 40 conduit and shall be buried to a depth meeting the NEC and local electrical codes. Acceptable copper wire types need to comply with any local requirements, but will be labeled either THHN or THWN. If above ground conduit must be used, it shall be rigid galvanized steel. Conduit elbows located at the electrical panel shall be rigid galvanized steel.
- E. Trenching or Directional Boring
 1. The installing contractor shall be responsible for locating all underground utilities including, but not limited to: natural gas, electric, water, sewer, cable TV, and telephone.
 2. The owner shall be responsible for locating and staking any underground facilities that are not utility related. Owner accepts responsibility for damage to such facilities that are not properly located or staked.
 3. Trenching depth and width shall be adequate to install appropriately sized conduit and to meet local and National Electrical Codes.
 4. Trenches shall be back-filled with excavated soil and compacted to approximately the same density of the surrounding soil to minimize settlement.
 5. No trench line or feeder circuit shall cross the playing area.
- F. Design Standards
 1. All circuits shall be designed so that the voltage at the safety disconnect in the electrical enclosure near the base of each pole is within 3% of nominal.

2. All work shall meet local and National Electrical Codes. It shall be the installing contractors' responsibility to correct any work deemed unacceptable by local electrical inspectors.

3. All electrical components shall be UL Listed for the appropriate application.

4. Each pole shall be on a dedicated circuit. If common poles are used, or a pole is to have fixtures on separate circuits, multiple dedicated circuits shall be run to that pole. Consult lighting equipment specifications and lighting manufacturer for special circuitry information.

G. Submittal Information

The successful contractor shall provide an electrical plan/schematic, detailing all of the equipment described above, to the owner prior to commencing work. This electrical plan/schematic shall bear the stamp of an Electrical Engineer with P.E. status within the State of Tennessee.

PART 5 – EXECUTION

5.1 CONTRACTOR'S DUTIES

All work performed under this contract shall be performed in accordance with all provisions of these specifications and drawings. Any deviations from the specifications or plans must be approved in writing by the owner or his representative.

A. Initial site inspection: The contractor shall be presumed to have made a reasonable inspection of the premises prior to the time of bidding and shall be held responsible for all information available through such inspection. The contractor shall immediately upon discovery, bring to the attention of the owner any conflicts that may occur among the various provisions of the specifications and plans. The owner shall resolve such conflicts and shall be responsible for any costs reasonably incurred by the contractor due to such conflict. Failure of the contractor to bring conflicts or exceptions to the attention of the owner shall allow the owner to require any change deemed necessary before acceptance by the owner.

B. Insurance Requirements:

1. Contractor's and Subcontractor's Insurance: The contractor shall not commence work under this contract until he has obtained all the insurance required under this paragraph and such insurance has been approved by the owner, nor shall the contract allow any subcontractor to commence work on his sub-contract until the insurance required of the subcontract has been so obtained and approved.

2. Workman's Compensation Insurance: The contractor shall procure and shall maintain during the life of the contract, Workman's Compensation Insurance and Death Liability Insurance for all of the employees engaged in work on the project under the contract, and in case any such work is sublet, the contractor shall require the subcontractor similarly to provide Workman's Compensation Insurance and Death Liability Insurance for all of the latter's employees engaged in such work unless such employees engaged in hazardous work on the project under his contract are not protected under Workman's Compensation Statute, the contractor shall provide and shall cause each subcontractor to provide adequate employer's general liability insurance for the protection of such of his employees not otherwise protected.

3. Contractor's Public Liability and Property Damage Insurance : The contractor shall procure and shall maintain during the life of this contract, Contractor's Public

Liability Insurance in an amount not less than \$500,000 for injuries, including accidental death to any one person and subject to the same limit for each person in an amount not less than \$500,000 on account of one accident, the Contractor's Property Damage Insurance in an amount not less than \$100,000 each occurrence and aggregate.

4. Subcontractor's Public Liability and Property Damage Insurance: The contractor shall require each of his subcontractors to procure and to maintain during the life of his subcontract, Subcontractor's Public Liability and Property Damage Insurance of the type specified in subparagraph 3 hereof in the amount specified.

5. Automobile Public and Property Damage Insurance: The contractor shall require each of his subcontractors to procure and to maintain during the life of his subcontract, Automobile Public Liability Insurance in an amount not less than \$500,000 single limit for injuries, including accidental death and property damage. Insurance for automobiles shall include: the contractor's owned automobiles and trucks, hired automobiles and trucks, and automobiles and trucks not owned by the contractor.

C. Bonding: The successful contractor shall furnish a performance bond in an amount equal to one hundred percent (100%) of the contract as security for the faithful performance of this contract, and a labor and material payment bond in an amount of one hundred percent (100%), or in the penal sum not greater than that prescribed by state, territory, or local law, as security for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract. The bonds shall be written by a surety licensed to do business in the locale in which the work is being performed and shall be satisfactory to the owner.

The successful contractor shall, upon completion of the project, protect the owner against defective materials or faulty workmanship for a period of two (2) years. The contractor, at the owner's request, shall furnish a maintenance bond for the above outlined maintenance term. This bond shall be in an amount not to exceed one hundred percent (100%) of the contract price.

D. Codes, Permits and Licenses: All work shall comply with the applicable rules of the National Electrical Code, the National Electrical Safety Code, the National Fire Codes, (published by the National Fire Protection Association), state and local codes and ordinances, and the terms and conditions of the services of the electrical utility, as well as any other authorities that may have lawful jurisdiction pertaining to the work specified. None of the terms or provisions of this specification shall be construed as waiving any of the rules, regulations or requirements of these authorities. The contractor shall procure all necessary permits or licenses to carry out his work, and shall pay the lawful fee therefore, as well as for any inspection fee or the cost of a certificate of approval. In any instance where these specifications call for materials for construction of a better quality or larger size than required by the codes, the provisions of these specifications shall take precedence. The codes shall govern in the case of direct conflict between the codes and the plans and the specifications.

5.2 MATERIALS

- A. Approved Materials: All materials supplied by the contractor under the provisions of these specifications and plans shall be new materials of the kind and character called for by the specifications. Defective equipment or material damaged in the course of installation or tests shall be replaced or repaired in a manner satisfactory to the owner. All materials and equipment to be furnished under these specifications shall be the standard product of a manufacturer regularly engaged in the production of such material and shall be the manufacturer's current standard design.
- B. Alternate Materials: The materials specified have been determined to have characteristics appropriate for the purposes of this project. Alternate materials will only be considered as a substitute bid on a separate substitution sheet. No bid will be approved which proposes to use a non-approved substitute. Substitutions will not be considered in determining the lowest responsive bid. The owner reserves the right to reject any or all bids.

5.3 SITE ACCESS

- A. Contractor Access: For the performance of the contract, the contractor will be permitted to occupy such portions of the site as shown on the plans, or as permitted by the owner or his representative. A reasonable amount of tools, materials or equipment for construction purposes may be stored in such place, but not more than is necessary to avoid delays in construction. Excavated and waste materials shall be piled or stocked in such a way as to not interfere with spaces that may be designated to be left free and unobstructed, not to inconvenience other contractors or the owners.
- B. Owner's Access: The owner's representative shall at all times have access to the work site. The contractor shall keep the owner advised of the progress of the project and shall provide opportunity for the owner or his representative to inspect each phase of the project. The contractor shall provide proper and safe facilities for such access and for inspection.

5.4 REPLACEMENT OF DAMAGED PROPERTY

The contractor shall replace all property damaged by him including fences, trees, plants, grass, walks, drives, building surfaces, etc.

5.5 INSTALLATION

- A. Manufacturer's Instructions: Written instructions for the installation of the sports lighting equipment shall be provided by the manufacturer. The contractor shall review the instructions prior to beginning installation and review any areas of concern with the manufacturer.
- B. Installation of Equipment: Contractor shall install lighting equipment per manufacturer's stated requirements to ensure lighting performance is achieved.
- C. Manufacturer Representative: A qualified representative from the sports lighting manufacturer shall be available to provide installation guidance if required by the contractor.

- D. Handling of Equipment: The lighting equipment shall be handled in an appropriate manner to ensure safe installation and prevent damage to the equipment. Repair or replacement of damaged component shall be the responsibility of the installing contractor.
- E. Rigging: Use the appropriate rated web fabric slings to lift components into position. Chains or cables shall not be allowed due to potential failure and damage to components.
- F. Completion Time: All construction, after Notice to Proceed, is to be completed May 1, 2014. If construction is not completed within the specified period, and the delay is due to the fault of the contractor, the owner may charge the contractor liquidated damages in the amount of \$ 500 per day. The contractor will be required to commence work within ten (10) calendar days after the owner issues a Notice to Proceed and shall be present at the job site during normal working hours and shall proceed to completion with due diligence.
- G. Clean-up: Upon completion of the work and before acceptance and final payment is made, the contractor shall clean and remove from the site of the work, surplus and discarded materials, temporary structures and debris of every kind. The contractor shall leave the site of work in a neat and orderly condition equal to that which originally existed. Surplus and waste materials removed from the site of the work shall be disposed of at locations satisfactory to the owner.

SUBMITTAL INFORMATION

Design Submittal Data Checklist and Certification

All items listed below are mandatory, shall comply with the specification and be submitted according to pre-bid submittal requirements

Included Tab Item Description

_____ A Letter/ Listing of all information being submitted must be included on the Checklist table of contents. List the name of the manufacturer's local Representative and his/her phone number. Signed submittal Checklist to be included.

_____ B On Field Lighting design drawing(s) showing:
Lighting a. Field Name, date, file number, prepared by, and other pertinent Design data.

b. Outline of field(s) being lighted, as well as pole locations referenced to the center of home plate, illuminance levels at grid spacing specified.

c. Pole height, number of fixtures per pole, as well as luminary information including wattage, lumens, and optics.

d. Height of meter above field surface.

e. Summary table showing the number and spacing of grid points; average, minimum, and maximum illuminance levels in foot candles (fc); uniformity including maximum to minimum ratio, coefficient of variance and uniformity gradient; number of luminaries, total kilowatts, average tilt factor; light loss factor.

f. Alternate manufacturers shall provide initial and maintained light scans using a maximum 0.70 Light Loss Factor to calculate maintained values.

_____ C Life Cycle Document life cycle cost calculations as defined in the specification.

Cost Identify energy costs for operating the luminaries. All costs should Calculation be based on 10 years.

_____ D Luminary Document showing each luminary's aiming angle and the poles on

Aiming which the luminaries are mounted. Each aiming point shall identify

Summary the type of luminary.

_____ E Structural Pole structural calculations and foundation design showing Calculations foundation shape, depth backfill requirements, rebar and anchor bolts (if required). Pole base reaction forces shall be shown on the foundation drawing along with soil bearing pressures. Design must be stamped by a structural engineer in the state of Kentucky.

_____ F Lighting Manufacturer shall provide written definition and schematics for

Contactors lighting contactor cabinets.

Cabinets

_____ G Electrical If bidding an alternate system, manufacturer must include a revised

Distribution electrical distribution plan including changes to service entrance,
Plans panels and wire sizing, signed by a licensed Electrical Engineer in
the state of Tennessee.

_____ H Performance Provide performance guarantee including a written
commitment to guarantee undertake all corrections required to meet the performance
requirements noted in these specifications at no expense to the
owner.

_____ I Warranty Provide written warranty information including all terms and
Conditions.

_____ J Project Manufacturer to provide a list of project references of similar
References products completed within the past three years.

_____ K Product Complete set of product brochures for all components
including a Information complete parts list and UL Listings.

_____ L Non- Manufacturer shall list all items that do not comply with the
Compliance specifications.

_____ M Compliance Manufacturer shall sign off that all requirements of the
specifications have been met and that the manufacturer will be responsible for any future
costs incurred to bring their equipment into compliance for all items not meeting
specifications and not listed in item

_____ N – Non-Compliance.

Manufacturer: _____

Signature: _____

Contact Name: _____

Date: _____

